REMARKS/ARGUMENTS

Favorable reconsideration of this application is respectfully requested.

Claims 1-11 are pending in this application. Withdrawn claims 12-15 are canceled by the present response without prejudice. Claim 2 was rejected under 35 U.S.C. § 112, second paragraph. Claims 1, 2, and 6 were rejected under 35 U.S.C. § 103(a) as unpatentable over Japanese patent application laid-open no. 9-283716 (herein "JP '716") in view of U.S. patent 6,274,919 to Wada. Claims 3-5 and 7-9 were rejected under 35 U.S.C. § 103(a) as unpatentable over JP '716 in view of Wada and further in view of U.S. patent application publication 2002/0008299 to Leonardi. Claim 10 was rejected under 35 U.S.C. § 103 as unpatentable over JP '716 and Wada and further in view of U.S. patent 5,113,237 to Stengl. Claim 11 was rejected under 35 U.S.C. § 103 as unpatentable over JP '716, Wada, and Leonardi, and further in view of Stengl.

Initially, applicants note the outstanding Office Action has not officially made the applied art to Wada, U.S. patent 6,274,919, of record. That is, that reference has not been listed on the provided form PTO-892. Applicants respectfully request that Wada be clearly made of record by being listed on a form PTO-892.

Addressing now the rejection of claim 2 under 35 U.S.C. § 112, second paragraph, that rejection is traversed by the present response.

Claim 2 was recited as unclear as "claim 1 defined a first trench isolation structure and claim 2 re-defined it". Applicants respectfully submit, however, that claim 2 does not re-define a "first trench isolation structure". Claim 1 positively recites a "***first*** trench isolation structure" (emphasis added) and claim 2 recites a "***second*** trench isolation structure" (emphasis added). Claim 2 thus defines a separate element than in claim 1. As claim 1 clearly sets forth the "first trench isolation structure" and claim 2 does not further limit that

element, but instead recites a separate "second trench isolation structure", applicants submit claim 2 is definite.

Addressing now each of the above-noted prior art rejections, those rejections are traversed by the present response.

Each prior art rejection is based on JP '716 in view of Wada rendering obvious the subject matter of independent claim 1. Applicants respectfully submit, however, that independent claim 1 distinguishes over that applied art.

First, applicants note independent claim 1 is amended to make a clarification. Specifically, independent claim 1 recites a "buried impurity region ... provided directly below said second impurity region". The structure clarified in independent claim 1 clearly distinguishes over the basis for the outstanding rejection.

Claim 1 includes a buried impurity region of the second conductivity type provided directly below the second impurity region and at the interface between the semiconductor layer and the semiconductor substrate, the buried impurity region being higher in impurity concentration than the semiconductor layer.

In contrast to that claimed structure, in the configuration shown in Figure 12 of JP '716, though the n^+ buried diffusion region 4 exists directly below the n diffusion region 5 connected to the electrode 10, the n^+ buried diffusion region 4 does not exist directly below the n diffusion region 5 connected to the aluminum wiring 8. The n^+ buried diffusion region 4 as shown in Figure 12 of JP '716 corresponds to the n^+ buried impurity region 20 as shown in Figure 3 of the present application, and there is no showing in Figure 12 of JP '716 of a component corresponding to the n^+ buried impurity region 4 as shown in Figure 3 of the present application. Accordingly, JP '716 does not disclose or suggest a component corresponding to the buried impurity region of Claim 1. Therefore, Claim 1 distinguishing over JP '716 and Wada even if combined.

Moreover, in Figure 12 of JP '716 the reference number "5" is used as the collective designation for the n^+-type diffusion regions, but that dos not mean that plural diffusion regions as indicated by the same reference number constitute the same physical diffusion region. That is, the n diffusion region 5 connected to the electrode 10 and the n diffusion region 5 connected to the aluminum wiring 8 are not the same diffusion region, but they are diffusion regions totally different from each other. If it assumed that the two diffusion regions 5 were the same diffusion region, the aluminum wiring 8 and the electrode 10 would have the same potential, which is inconsistent with the recitation in paragraph [0003] of JP '716 stating that "the current passing through the p diffusion region 6 causes a difference in potential between the electrode 10 and the aluminum wiring 8." Further, if it is assumed that three n^+ diffusion regions 5 as shown in Figure 12 of JP '716 were the same diffusion region, the source region and the drain region in the nch-RESURF MOSFET would short-circuit, and consequently the nch-RESURF MOSFET would fail to work. Therefore, if the Office Action is considering that the n diffusion region 5 connected to the electrode 10 and the n diffusion region 5 connected to the aluminum wiring 8 are the same component, such recognition is improper.

In view of these foregoing comments, applicants respectfully submit independent claim 1, and the claims dependent therefrom, patentably distinguish over the combination of teachings of JP '716 in view of Wada.

Moreover, none of the further cited disclosures in Leonardi or Stengl are directed to the above-noted features, nor are any disclosures in Leonardi or Stengl believed to cure the above-noted deficiencies of JP '716 in view of Wada.

In view of the present response, applicants respectfully submit independent claim 1, and the claims dependent therefrom, are allowable over the applied art.

As no other issues are pending in this application, it is respectfully submitted that the present application is now in condition for allowance, and it is hereby respectfully requested that this case be passed to issue.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.

Gregory J. Maier
Registration No. 25,599
Surinder Sachar
Registration No. 34,423
Attorneys of Record

Customer Number
22850

Tel: (703) 413-3000
Fax: (703) 413 -2220
(OSMMN 06/04)

I:\ATTY\SNS\24'S\247968\247968US-AM.DOC